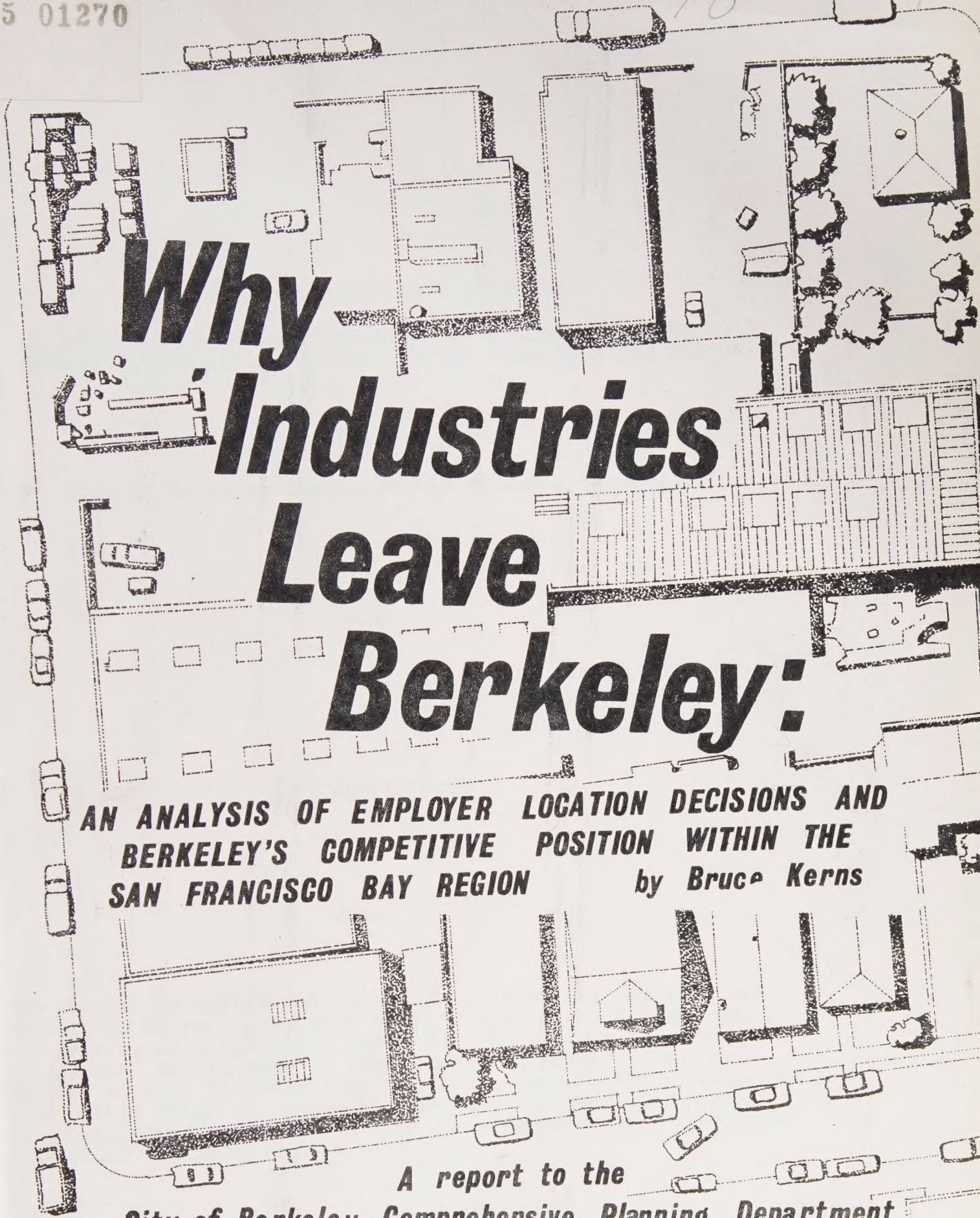
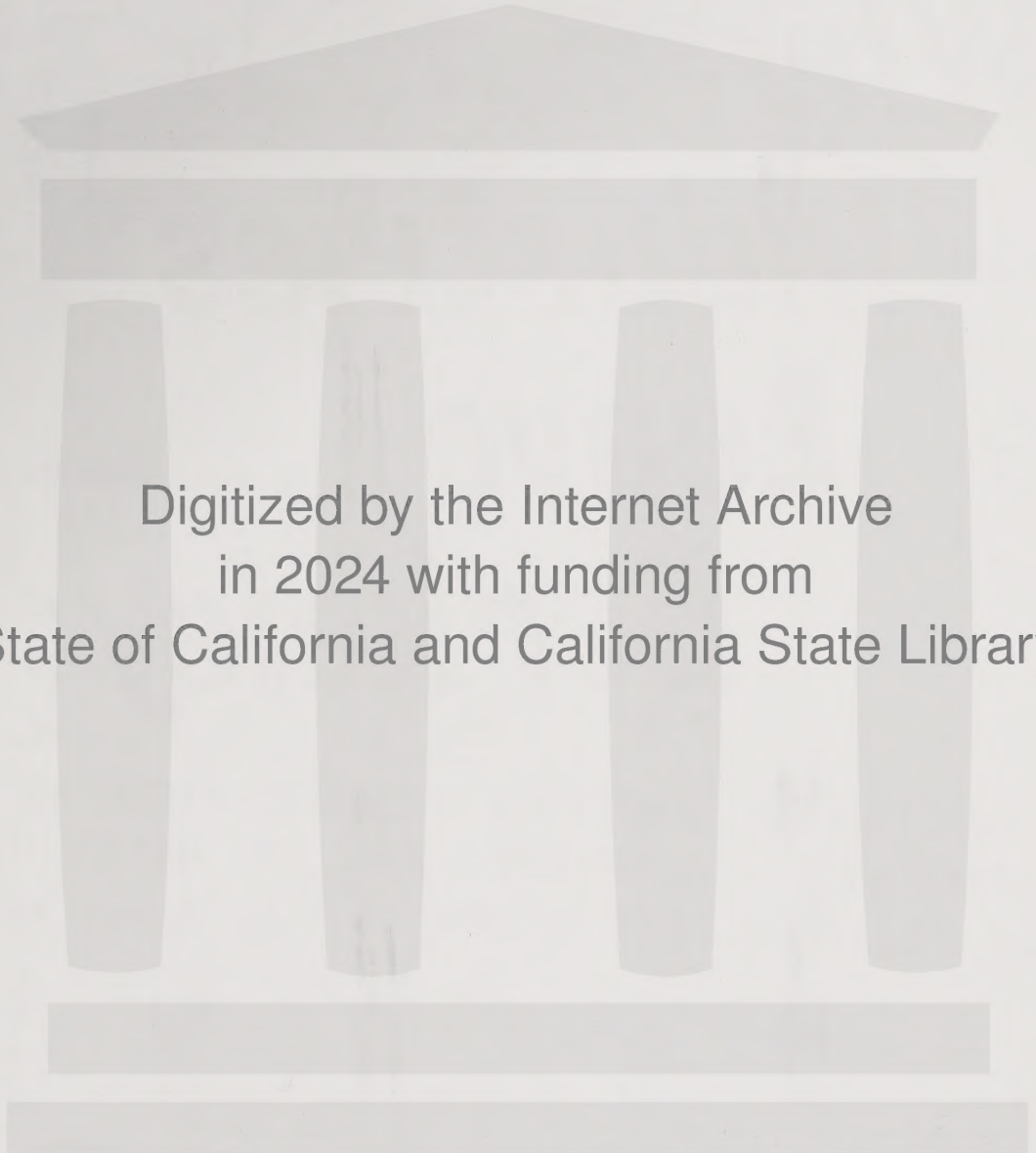


Why Industries Leave Berkeley:

AN ANALYSIS OF EMPLOYER LOCATION DECISIONS AND BERKELEY'S COMPETITIVE POSITION WITHIN THE SAN FRANCISCO BAY REGION

by Bruce Kerns

A report to the
City of Berkeley Comprehensive Planning Department
June 1977



WHY INDUSTRIES LEAVE BERKELEY:

AN ANALYSIS OF EMPLOYER LOCATION DECISIONS AND BERKELEY'S COMPETITIVE POSITION WITHIN THE SAN FRANCISCO BAY REGION

A Report to the

City of Berkeley Comprehensive Planning Department

by

Bruce Kerns

June, 1977

The author conducted this study as part of his professional education in the Department of City and Regional Planning, University of California, Berkeley. This paper is submitted in partial fulfillment of the course requirements for the Master of City Planning degree. The judgments and conclusions are solely those of the author and not necessarily endorsed by the Department or by the Agency whose cooperation facilitated the study's completion.

TABLE OF CONTENTS

ABSTRACT

This report is an analysis of the movement of manufacturing firms from Berkeley to industrial areas in other cities. Factors that typically influence industrial location decisions are used to compare Berkeley with other cities in the San Francisco bay area. Berkeley compares poorly with other cities in the region as a location for industry when judged by resident labor force characteristics, average wage rates, land availability, land costs, property tax rates, and crime rates. A survey of employers provides an outline of the factors that influence manufacturers to relocate their Berkeley plants in other cities. Although Berkeley's high property tax rates and negative business climate influenced the relocation of many firms, other factors had much greater overall impact on the location decisions of employers. In particular, inadequate or unavailable space for expansion in Berkeley, high land costs, and a poor labor base for production workers were more important in determining the movement of industries from the city.

INTRODUCTION

Industries have been leaving Berkeley, and the number of new firms locating in the city has not kept pace with the number of firms moving away. Despite the proximity of Berkeley's industrial area to excellent transportation facilities and the assets provided by the University of California campus as a generator of new ideas and products, Berkeley has experienced a net decline in the number of manufacturing firms since the mid-1960's.

For several years, many Berkeley businessmen have been firing salvos of criticism at the city's high property tax rates, its radical politics, and its bad business climate. These factors are primarily responsible for the exodus of firms from Berkeley, the businessmen claim.[1] However, some citizens and city officials say these factors, especially the purported anti-business bias of the city, are overemphasized as important determinants of location change. Instead, they say the decline of manufacturing establishments in Berkeley can be explained by the national trend of industrial movements away from cities to areas of cheaper labor.[2]

The debate between these two camps has not resulted in a clear appraisal of the factors that have influenced firms to move out of Berkeley. This report to the Berkeley Comprehensive Planning Department attempts to fill that void by presenting an

analysis of the movement of industries from the city. It is hoped that the analysis will offer a clearer explanation of the decline of manufacturing establishments in Berkeley and provide a basis for the exploration of alternative policies that may influence future relocation decisions.

The analysis begins with a documentation of the change in manufacturing establishments and employment in the city between 1958 and 1972. Next, the report concentrates on the status of Berkeley as a location for industry relative to other locations in the San Francisco Bay Area. Factors that influence industrial location decisions, such as land prices, wage rates, resident labor force characteristics, and property tax rates, are used to compare Berkeley with other areas in the region. The comparisons highlight Berkeley's ability to attract (or repel) industrial firms relative to other Bay Area locations. Finally, the results of a survey of industries that have left Berkeley are analyzed. The survey responses provide an outline of the factors important in the decision of manufacturers to leave Berkeley.

HISTORICAL TREND OF ESTABLISHMENTS AND EMPLOYMENT

The number of manufacturing establishments and employees in Berkeley at four points between 1958 and 1972 are presented in Table 1. During that 14-year period, the number of manufacturing firms in the city decreased by 15, a loss of six per cent. The number of manufacturing firms was highest in 1963; the total declined in each reporting period thereafter. The largest decline occurred between 1967 and 1972, when the city experienced a net loss of 22 firms, a decrease of nearly nine per cent.

While the number of manufacturing firms in Berkeley declined after 1963, manufacturing employment continued to grow. Table 1 shows that employment increased through 1967, and stabilized between 1967 and 1972. Manufacturing employment increased by 1000 - a growth of 13.5 per cent - between 1958 and 1967. There was no change in total manufacturing employment between 1967 and 1972.

While Berkeley experienced a net loss of manufacturing firms between 1963 and 1972, the city's relative share of total manufacturing establishments in Alameda County and the nine-county bay region (including Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma Counties) decreased each period after 1958. The figures in

TABLE 1

NUMBER OF MANUFACTURING ESTABLISHMENTS AND EMPLOYEES IN BERKELEY: 1958-1972

	1958	1963	1967	1972	Change, 1958-72
Number of Establishments	246	263	253	231	-15
Number of Employees	7400	8100	8400	8400	1000

Source: U.S. Bureau of the Census, Census of Manufactures, 1972, Area Series, California MC72(3)-5, Table 8; U.S. Bureau of the Census, Census of Manufactures, 1967, Volume III, Area Statistics, Part 1, Alabama-Montana, Table 8; U.S. Bureau of the Census, Census of Manufactures, 1963, Volume III, Area Statistics, Table 4; U.S. Bureau of the Census, Census of Manufactures, 1958, Volume III, Area Statistics, Table 3.

Table 2 represent the percentage of manufacturing firms in both Alameda County and the entire bay region that were located in Berkeley. The city's share of the manufacturing firms in Alameda County decreased 3.1 percentage points between 1958 and 1972; nearly two-thirds of this decline in relative share occurred between 1967 and 1972. Berkeley's share of the total number of manufacturing firms in the bay region decreased 1.1 percentage points; again, nearly two-thirds of the loss in Berkeley's relative share of establishments in the region occurred between 1967 and 1972.

Although manufacturing employment in Berkeley increased between 1958 and 1972, the city's share of manufacturing employment in Alameda County and the bay region declined over

TABLE 2

BERKELEY'S SHARE OF MANUFACTURING ESTABLISHMENTS IN ALAMEDA COUNTY AND THE NINE-COUNTY BAY REGION: 1958-72

	1958	1963	1967	1972	Change, 58-72
Berkeley's share of Alameda County establishments (%)	15.9	14.9	14.8	12.8	-3.1
Berkeley's share of regional establishments (%)	4.3	4.1	3.9	3.2	-1.1

Source: U.S. Bureau of the Census, Census of Manufactures, 1972, Area Series, California MC72(3)-5, Table 6-8; U.S. Bureau of the Census, Census of Manufactures, 1967, Volume III, Area Statistics, Part 1, Alabama-Montana, Table 6-8; U.S. Bureau of the Census, Census of Manufactures, 1963, Volume III, Area Statistics, Table 4; U.S. Bureau of the Census, Census of Manufactures, 1958, Volume III, Area Statistics, Table 3.

the total 14-year period. However, the decrease in Berkeley's share of county and regional employment occurred between 1958 and 1967, only. The figures in Table 3 show that Berkeley's share of Alameda County manufacturing employment increased slightly between 1967 and 1972 (a 0.1 percentage point increase), and that Berkeley's share of regional manufacturing employment remained constant between 1967 and 1972.

Berkeley's manufacturing sector, while experiencing a net loss of establishments between 1967 and 1972, maintained both a constant absolute number of manufacturing employees and a constant relative share of county and regional manufacturing employment. Although firms left Berkeley, total manufacturing employment did not decline between 1967 and 1972.

TABLE 3

BERKELEY'S SHARE OF MANUFACTURING EMPLOYMENT IN ALAMEDA COUNTY AND THE NINE-COUNTY BAY REGION: 1958-72

	1958	1963	1967	1972	Change, 58-72
Berkeley's share of Alameda County employment (%)	10.8	10.9	10.5	10.6	-0.2
Berkeley's share of regional employment (%)	3.1	2.7	2.5	2.5	-0.6

Source: U.S. Bureau of the Census, Census of Manufactures, 1972, Area Series, California MC72(3)-5, Table 6-8; U.S. Bureau of the Census, Census of Manufactures, 1967, Volume III, Area Statistics, Part 1, Alabama-Montana, Table 6-8; U.S. Bureau of the Census, Census of Manufactures, 1963, Volume III, Area Statistics, Table 4; U.S. Bureau of the Census, Census of Manufactures, 1958, Volume III, Area Statistics, Table 3.

The degree of change in the number of establishments and employees experienced by separate industrial sectors in Berkeley can be seen by disaggregating 1967 and 1972 manufacturing data (disaggregation of Berkeley data was not available in the Census of Manufactures prior to 1967). Table 4 shows the change in establishments and employment between 1967 and 1972 for six separate industrial sectors. In 1967, these six sectors accounted for 71.4 per cent of total manufacturing employment and 65.2 per cent of total manufacturing establishments in Berkeley. In 1972, these same sectors accounted for 65.5 per cent of total manufacturing employment and 66.2 per cent of total manufacturing establishments.

TABLE 4

CHANGE IN BERKELEY MANUFACTURING ESTABLISHMENTS AND EMPLOYMENT: 1967-1972

Industrial Sector	Change in Establishments		Change in Employees	
	Absolute Change	Percentage Change	Absolute Change	Percentage Change
Food and Kindred Products	-7	-46.7	-300	-27.3
Printing and Publishing	17	42.5	100	16.7
Chemicals and Allied Products	-5	-17.2	-200	-9.5
Primary Metals	-1	-1.0	-100	-16.7
Fabricated Metals	-10	-28.6	0	0
Non-Electrical Machinery	-6	-16.7	0	0
Other Manufacturing	-10	-11.4	500	20.8
Total Manufacturing	-22	-8.7	0	0

Source: U.S. Bureau of the Census, Census of Manufactures, 1972, Area Series, California MC72(3)-5, Table 8; U.S. Bureau of the Census, Census of Manufactures, 1967, Volume III, Area Statistics, Part 1, Alabama-Montana, Table 8.

The largest percentage decrease in establishments and employees between 1967 and 1972 occurred in food and kindred products industries. This sector also experienced the largest absolute drop in employment. The greatest absolute decrease in establishments occurred in fabricated metal industries. Only

printing and publishing industries experienced growth in both establishments and employees between 1967 and 1972.

Two industrial sectors, fabricated metal and non-electrical machinery, lost firms yet maintained constant employment. Manufacturing industries not included in the six sectors (i.e., other manufacturing) experienced a decrease in establishments and an increase in employees. Quite clearly, the average number of employees in these industries increased between 1967 and 1972. This can be seen in Table 5, which presents the average number of employees per establishment for the six industrial sectors in both 1967 and 1972. Interestingly, all sectors (including other manufacturing) experienced an increase in average employees per establishment except printing and publishing and primary metal industries. It appears that although establishments and employment increased in printing and publishing industries, the average firm was smaller in 1972 than in 1967. However, in nearly all other Berkeley industrial sectors, firms became larger or large firms remained in Berkeley while smaller firms left.

Components of Employment Change

In order to more closely analyze the forces influencing the manufacturing sector of Berkeley, an effort has been made to highlight the components of employment change between 1967 and 1972. The technique used, commonly called shift-share analysis, provides a method for sorting out the factors that

TABLE 5

AVERAGE NUMBER OF EMPLOYEES PER MANUFACTURING ESTABLISHMENT IN BERKELEY: 1967-72

Industrial Sector	1967	1972	Change	Percentage Change
Food and Kindred Products	73.3	100.0	26.7	36.4
Printing and Publishing	15.0	12.3	-2.7	-18.0
Chemicals and Allied Products	72.4	79.2	6.8	9.4
Primary Metals	60.0	55.6	-4.4	-7.3
Fabricated Metals	14.3	20.0	5.7	39.9
Non-Electrical Machinery	30.6	36.7	6.1	19.9
Other Manufacturing	27.3	37.2	9.9	36.3
Total Manufacturing	33.2	36.4	3.2	9.6

Source: U.S. Bureau of the Census, Census of Manufactures, 1972, Area Series, California MC72(3)-5, Table 8; U.S. Bureau of the Census, Census of Manufactures, 1967, Volume III, Area Statistics, Part 1, Alabama-Montana, Table 8.

relate to the differences in the rates of employment growth between Berkeley and the bay region.[3] The employment change in each industrial sector between 1967 and 1972 can, through the shift-share technique, be attributed to one of three factors: regional growth, industrial mix, or local share. The regional growth factor accounts for the employment change that would have occurred in a particular industry in Berkeley had that industry experienced the same rate of growth as total manufacturing employment in the region (defined as the San Francisco-Oakland SMSA and San Jose SMSA, since employment data of comparable disaggregation was not available for Sonoma, Napa, and Solano Counties). The industrial mix factor accounts for the employment change in an industry in Berkeley due to that industry's status within the region as fast or slow growing. The rate of growth of a particular industry in the region is characterized as fast if it exceeds, and slow if it falls short of, the growth rate of total manufacturing employment in the region. Finally, the local share factor accounts for the change in a Berkeley industry's employment that is attributable to local growth, i.e., the difference between the industry's growth rate in Berkeley and its growth in the region as a whole.

The regional growth, industrial mix, and local share components sum to the actual change in employment between 1967 and 1972 for each industrial sector. The regional growth component shows the impact of the total regional manufacturing sector on the growth of an individual sector. The industrial

mix component indicates the ability of one industry in the region to compete with all other manufacturing industries in the region. The local share component shows how well Berkeley is competing with other locations in the region for each industrial sector.[4]

Table 6 shows the components of employment change in Berkeley between 1967 and 1972. The results of the shift-share analysis indicate that three of the six industrial sectors in Berkeley had negative industrial mix growth components. This means that region-wide, these sectors (food and kindred products, printing and publishing, and primary metal industries) were not competing effectively with other industrial sectors. The three industrial sectors were slow-growth sectors, and accounted for 23.8 per cent of the total manufacturing employment in Berkeley in 1972.

Four industrial sectors had negative local share growth components. This indicates that within Berkeley, these four sectors were unable to compete with the same sectors in the region as a whole. In other words, these sectors had lower growth rates in Berkeley between 1967 and 1972 than in other locations in the region. The four sectors with negative local share growth components (food and kindred products, chemicals and allied products, fabricated metals, and non-electrical machinery) accounted for 51.2 per cent of the total manufacturing employment in Berkeley in 1972.

TABLE 6

COMPONENTS OF MANUFACTURING EMPLOYMENT CHANGE IN BERKELEY: 1967-1972

Industrial Sector	Regional Growth	Industrial Mix	Local Share	Total Change
Food and Kindred Products	-7	-140	-154	-300
Printing and Publishing	-4	-15	119	100
Chemicals and Allied Products	-13	48	-235	-200
Primary Metals	-4	-146	50	-100
Fabricated Metals	-3	19	-16	0
Non-Electrical Machinery	-7	176	-169	0
Other Manufacturing	-14	41	473	500
Total	-52	-17	68	0

note: Region defined as San Francisco-Oakland SMSA and San Jose SMSA

Source: U.S. Bureau of the Census, Census of Manufactures, 1972, Area Series, California MC72(3)-5, Table 6-8; U.S. Bureau of the Census, Census of Manufactures, 1967, Volume III, Area Statistics, Part 1, Alabama-Montana, Table 6-8.

The results of the shift-share analysis indicate that although Berkeley's manufacturing employment in 1972 was concentrated in non-slow-growing industries, many Berkeley industries were unable to generate employment growth locally at a rate comparable to the growth experienced at other locations in the region. These industrial sectors found other locations in the region to be better environments for employment growth than Berkeley.

BERKELEY AS A LOCATION FOR INDUSTRY

Clues to the movement of industrial firms out of Berkeley and the shift of employment growth in certain industries from Berkeley to other cities in the region may be uncovered by evaluating the factors important in manufacturers' location decisions. Location theory argues that manufacturers determine their firms' location by comparing the costs and revenues of doing business at different sites. Land, labor, and transportation costs are all considered. The chosen site will be the location that minimizes these costs and maximizes revenues to the manufacturer's greatest advantage.

In practice, location decisions are sometimes made for reasons other than least-cost or maximum profit, however. A city can be chosen as a location for an industry because its cultural environment is "superior" to competing sites, it has more desirable housing for the firm's executives than other cities, or its "business climate" is more conducive to industrial growth. In short, location theory is not an exact science. At the bottom line, a choice can be based either on the whim and fancy of an individual manufacturer or the careful analysis of business factors at different locations.

The following sections compare the desirability of Berkeley as a location for industry with other areas in the bay region. The factors evaluated are those most commonly used in making

location decisions. It should be kept in mind, however, that intangible factors such as those mentioned above can sometimes loom important in the ultimate decision.

Labor Force Characteristics

A manufacturing firm interested in a resident labor force will find Berkeley rich in professional workers but poor in workers capable of production tasks. Table 7 shows the number of Berkeley residents in 1960 and 1970 with occupations in one of the four categories from which manufacturing employees derive. White collar manufacturing employees have professional or managerial occupations, and blue collar, or production-related, manufacturing employees are classified as craftsmen or operatives. Professional and managerial workers constituted 37.9 per cent of Berkeley's employed residents in 1960, and 43 per cent of the city's employed residents in 1970. Craftsmen and operatives, however, made up 16.4 per cent of the employed residents in Berkeley in 1960, and only 10.9 per cent of the employed residents in 1970.

Although craftsmen and operatives are declining in absolute numbers and as percentages of total employed residents in other bay area communities, Berkeley's resident labor force is particularly weak in these occupations. Table 8 compares the percentage of total employed residents in Berkeley and other bay area cities that reported occupations in the four categories in 1970. Clearly, craftsmen and operatives constituted much

TABLE 7

OCCUPATIONS OF EMPLOYED BERKELEY RESIDENTS: 1960 and 1970

Occupation	Number of Employed Residents Reporting Occupations	
	1960	1970
Professional, Technical, and Kindred Workers	13,168	18,516
Managers and Administrators	3,463	3,233
Craftsmen	3,460	2,970
Operatives, Non-Transport	3,710	2,512
Other Occupations	23,212	23,331
Total	47,013	50,562

	Percentage Distribution of Employed Residents Reporting Occupations	
Professional, Technical, and Kindred Workers	30.0	36.6
Managers and Administrators	7.9	6.4
Craftsmen	7.9	5.9
Operatives, Non-Transport	8.5	5.0
Other Occupations	45.7	46.1
Total	100.0	100.0

Source: U.S. Bureau of the Census, Census of Population: 1970, Volume I, Characteristics of the Population, Part 6, California - Section 1, Table 86; U.S. Bureau of the Census, Census of Population: 1960, Volume 1, Characteristics of the Population, Part 6, California, Table 84.

TABLE 8

PERCENTAGE DISTRIBUTION OF THE OCCUPATIONS OF EMPLOYED RESIDENTS IN THE NINE-COUNTY REGION, BERKELEY, AND SELECTED CITIES: 1970

Occupation	Occupational Distribution of Employed Residents in ... (%)					
	Berkeley	Oakland	San Leandro	Hayward	San Jose	Region
Professional, Technical, and Kindred Workers	36.6	15.8	10.7	11.6	20.9	19.3
Managers and Administrators	6.4	7.3	8.4	6.9	8.4	9.3
Craftsmen	5.9	11.4	17.1	18.6	13.5	12.6
Operatives, Non-Transport	5.0	9.8	12.1	13.5	11.4	8.6
Other Occupations	46.1	55.7	51.7	49.4	45.8	50.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: U.S. Bureau of the Census, Census of Population: 1970, Volume I, Characteristics of the Population, Part 6, California, Section 1, Table 86; U.S. Bureau of the Census, Census of Population: 1960, Volume I, Characteristics of the Population, Part 6, California, Table 84.

smaller percentages of total employed residents in Berkeley than in Oakland, San Leandro, or San Jose. In Oakland, the combined percentage of craftsmen and operatives in the employed resident labor force was nearly twice that of Berkeley, and in San Leandro the percentage was over two and one-half times greater than the percentage in Berkeley. In the nine-county region as a whole, the percentage of craftsmen and operatives

was approximately twice as large as the percentage in Berkeley.

Certainly, manufacturing firms locating in Berkeley can attract production workers from adjacent cities. In fact, in 1970, 82.5 per cent of the craftsmen and 76.7 per cent of the operatives working in Berkeley lived outside the city (see Table 9). Nevertheless, to the extent a firm is concerned with a resident labor force oriented toward production-related occupations, there are other bay area cities that will appear more attractive than Berkeley. A firm presently located in Berkeley that is experiencing difficulties in attracting production employees might find a more suitable labor force in other bay area cities.

TABLE 9

OCCUPATIONAL DISTRIBUTION OF EMPLOYED PERSONS WORKING IN BERKELEY BY PLACE OF RESIDENCE: 1970

Occupation	Total Persons Working in Berkeley	Percentage of Berkeley Workers Living in Berkeley	Percentage of Berkeley Workers Living Outside Berkeley
Professional, Technical, and Kindred Workers	16,043	50.9	49.1
Managers and Administrators	4,462	33.9	66.1
Craftsmen	4,451	17.5	82.5
Operatives, Non-Transport	3,509	23.3	76.7

Source: U.S. Bureau of the Census, Census of Population: 1970, Subject Reports, Final Report PC (2)-6D, Journey to Work, Table 2.

Labor Cost

The cost of labor is a major factor in the location decision of every manufacturer. A large portion of any firm's total costs is paid out to labor, and manufacturers seek to minimize labor costs in their location choice. Differentials in wage rates among regions are important determinants of interregional industrial location change (the movement of textile industries from the Northeast to the South was largely influenced by differences in the cost of labor, for example). Differences in intraregional wage rates, however, are typically not as great as interregional differences. It is argued, therefore, that labor costs are not an important factor in choosing a location among several sites within a region. The presence of an individual manufacturer in a region such as the bay area implies that the firm has already made a decision concerning the difference in the cost of labor between, for example, Berkeley and Bakersfield.[5] The final decision on a location within a region is based on factors other than labor cost because, the argument goes, the major choice among different regional wage rates has already been made.

Wage rates in different locations in the nine-county bay region are not uniform within the same industry, however. In fact, manufacturers can substantially reduce their labor costs by changing locations within the region. Table 10 shows the average 1975 hourly wage rates for production workers in durable

and non-durable good manufacturing industries in the four SMSA's that make up the bay region. Since wage rate data are not available for cities and most counties, it is impossible to compare wage rates in Berkeley with wage rates in other cities. However, it is possible to compare the average wage rates in the San Francisco-Oakland SMSA with the rage rates in the region's other three SMSA's. It should be noted, however, that the average wage rates may not be perfectly comparable because of possible differences in the mix of durable and non-durable goods industries among SMSA's. Table 10 indicates that wages for both durable and non-durable goods production workers are higher in the San Francisco-Oakland SMSA than in the other bay area SMSA's.

TABLE 10

AVERAGE 1975 HOURLY WAGE RATES FOR MANUFACTURING PRODUCTION WORKERS IN BAY AREA SMSA'S

(Constant Dollars, where 1976=100)

SMSA	Durable Goods Industries	Non-Durable Goods Industries
San Francisco-Oakland	6.78	6.36
San Jose	5.95	5.78
Santa Rosa	5.46	4.90
Vallejo-Fairfield-Napa	6.48	5.26

Source: U.S. Bureau of Labor Statistics, Employment and Earnings, States and Areas: 1939-1974, Bulletin 1370-11, 1975; State of California, California Statistical Abstract, 1976, Table C-13.

Table 11 shows the percentage difference in average 1972 and 1975 wage rates between the San Francisco-Oakland SMSA and the other three SMSA's (calculated in constant dollars, where 1976=100). The differences among the wage rates in the San Francisco-Oakland SMSA and the rates in the other SMSA's increased for both durable and non-durable goods manufacturing production workers between 1972 and 1975. In 1975, a durable goods manufacturer located in the San Francisco-Oakland SMSA could have reduced his or her cost for production workers by 12.2 per cent had the firm been able to offer wages equal to those in the San Jose SMSA. The manufacturer could have reduced his or her labor costs for durable goods production workers by nearly 20 per cent had the firm been able to pay Santa Rosa SMSA wages. Non-durable goods manufacturers in the San Francisco-Oakland SMSA could have reduced their firms' cost for production workers in 1975 by 9.1 per cent if they had paid wages comparable to those offered in the San Jose SMSA, and by 23 per cent had they paid wages comparable to those offered in the Santa Rosa SMSA.

Manufacturers located in the San Francisco-Oakland SMSA, including Berkeley, pay their production workers the highest average wage of the region's four SMSA's. Firms in the San Francisco-Oakland SMSA interested in lowering their labor costs can realize 10 to 20 per cent reductions by relocating in other SMSA's.

TABLE 11

PERCENTAGE DIFFERENCE BETWEEN AVERAGE HOURLY WAGE RATES FOR MANUFACTURING PRODUCTION WORKERS IN SAN FRANCISCO-OAKLAND SMSA AND WAGE RATES IN OTHER BAY AREA SMSA'S: 1972 and 1975

Wage Rate in ____SMSA is ____% Lower than Wage Rate in San Francisco-Oakland SMSA

SMSA	1972		1975	
	Durable Goods	Non-Durable Goods	Durable Goods	Non-Durable Goods
San Jose	10.8	8.9	12.2	9.1
Santa Rosa	15.9	20.8	19.5	23.0
Vallejo-Fairfield-Napa	3.1	17.3	4.4	17.3

Source: U.S. Bureau of Labor Statistics, Employment and Earnings, States and Areas: 1939-1974, Bulletin 1370-11, 1975; State of California, California Statistical Abstract, 1976, Table C-13.

Land Available for Industrial Development

There is little vacant land available for industrial development in Berkeley. In 1975, approximately 33 acres were vacant and zoned for industrial use in the city.[6] Eighteen acres, or 54.5 per cent of the total vacant industrial land, were located in the controversial West Berkeley Industrial Park. The industrial area of Berkeley is bordered on the east by residential areas, on the west by Interstate Highway 80, and on the north and south by the cities of Albany and Emeryville. Consequently, Berkeley, like many other older cities, cannot easily expand its industrial area or increase the acreage available for industrial development.

The vacant industrial acreage in Berkeley represents only a very small amount of the vacant, industrially-zoned land in the region. Table 12 shows that in 1975, Berkeley's 33 acres represented only 0.4 per cent of the vacant industrial land in Alameda County, and 0.1 per cent of the vacant industrial land in the nine-county region.

TABLE 12

VACANT ZONED INDUSTRIAL LAND IN BERKELEY AS PERCENTAGE OF TOTAL VACANT INDUSTRIAL LAND IN ALAMEDA COUNTY AND NINE-COUNTY REGION: 1975

	Berkeley	Alameda County	Region
Total Vacant Zoned Industrial Land (acres)	33	9,074	29,522
Vacant Industrial Land in Berkeley as Percentage of Vacant Land in...	100.0	0.4	0.1

Source: Association of Bay Area Governments, Vacant Industrial Lands Inventory, Working Paper No. 21, February 23, 1976.

The amount of vacant industrial land in Berkeley compares poorly with the amount of vacant industrial land available in other bay area cities. Table 13 shows the vacant industrial acreage available in 1975 in several bay area cities. Concord has over 13 times the vacant industrial acreage of Berkeley. Hayward has 37 times the acreage, and Richmond has 62 times the acreage of Berkeley.

TABLE 13

VACANT ZONED INDUSTRIAL LAND IN BERKELEY AND SELECTED BAY AREA CITIES: 1975

City	Vacant Zoned Industrial Land (acres)
Berkeley	33
Concord	431
Hayward	1233
Richmond	2044
San Francisco	555
San Jose	1059
San Leandro	937

Source: Association of Bay Area Government, Vacant Industrial Lands Inventory, Working Paper No. 21, February 23,1976.

Berkeley has little potential for attracting bay area industries that desire undeveloped land or large acreage parcels. Most other cities in the region have more vacant industrial land than Berkeley. The lack of available industrial land in Berkeley also presents problems for firms already located in the city that wish to expand. Few firms have vacant land adjacent to their sites. Should a Berkeley firm wish to expand its plant, it will often be forced to relocate (either within or outside the city) simply because it cannot absorb adjacent vacant land.

Land Cost

Manufacturers seeking to purchase inexpensive land on which

to locate their firms will not find such land in Berkeley. Historically, the value of industrial land in Berkeley has been higher than most other industrial lands available in the nine-county region. Given the limited amount of industrial land in the city and Berkeley's status, along with San Francisco, Oakland, and Emeryville, as a well-established manufacturing area, it is not surprising that the value of land has been high. Industrial land in Berkeley typically sells for $1.50 to $2.00 per square foot (or $65,000 to $87,000 per acre), according to realtors familiar with the market for industrial land in the city.

Table 14 shows Berkeley's ranking among 14 other cities in the region between 1958 and 1974 with respect to the value of industrial land. A rank for both low and high land values is provided for each of the five years indicated.. The low value category typically represents the land costs of large, unimproved sites requiring some preparation for construction. Streets, water, sewer, and other services are adjacent but not within the property area. However, in more concentrated industrial areas with limited available industrial land, such as Berkeley, Emeryville, and San Francisco, the low value category often represents less-than-acre size parcels. The high value category includes fully-improved industrial property, generally of smaller size (one-half to five acres) with all improvements to serve the site.

TABLE 14

RANKING OF REGIONAL INDUSTRIAL LAND VALUES;
BERKELEY'S RANK AMONG 14 BAY AREA CITIES:
1958-1974

(1=Highest Land Value per Acre, 14=Lowest Land Value per Acre)

Year	Ranking of Low Land Value	Ranking of High Land Value
1958	3	4
1963	3	3
1967	3	5
1972	4	6
1974	6	8

note: Cities include Concord, Emeryville, Hayward, Oakland, Redwood City, Richmond, Napa, San Francisco, San Jose, San Leandro, Santa Clara, South San Francisco, and Vallejo.

Source: Real Estate Research Council of Northern California, Northern California Real Estate Report, Vol. 26, no. 3, 1974; Vol. 24, no. 3, 1972; Third Quarter, 1967; First Quarter, 1964.

Both low and high land values in Berkeley were among the four highest of the 14 cities in 1958 and 1963. Only San Francisco, Emeryville, and Oakland had higher land values in those years. Beginning in 1967, however, Berkeley's land value rank began to fall slightly. By 1974, industrial land in Berkeley was still very expensive, but the value of land in suburban cities such as South San Francisco, Redwood City, Santa Clara, and Concord had increased substantially, especially in the high value category. The value of prime industrial land in these cities in 1974 was higher than the value of prime land in Berkeley.

Berkeley remained among the top six rankings in the low value category in 1974 because there was little industrial land available in the city, and there was no possibility for expansion of industrial zones. Suburban cities in the region had more available and undeveloped industrial land, so their low values were much less than Berkeley's. Manufacturers interested in low land prices or large, inexpensive parcels could find industrial land in other cities for a lower cost than in Berkeley.

The decrease in Berkeley's high land value ranking between 1958 and 1974 indicates that, to a certain degree, Berkeley has lost some competitive advantage for the location of industries as reflected in prime land costs. Manufacturers are willing to pay higher land costs to locate in other bay area cities. This phenomenon is not common to other long-established industrial areas in the region, however. Prime land costs in San Francisco, Emeryville, and Oakland remained among the very highest in the region in 1974.

Property Tax

The degree to which differentials in property taxes influence location decisions has been debated for years. Popular opinion gives credence to the importance of property tax as a major factor in determining industrial location. However, numerous studies of the role of taxation in location decisions indicate that the effect of property taxes on industrial location

is minor.[7]

Property taxes typically represent a very small percentage of a manufacturer's total business expenses. A study in Michigan, a well-known high-tax state, found that property taxes constituted about 1.5 per cent of value added by manufacturers.[8] A study of bay area businesses by the Association of Bay Area Governments estimated that local taxes represented approximately two per cent of gross receipts.[9] The fact that property taxes represent such a small percentage of total costs does not in itself prove that taxes have no significant effect on location, however. A small percentage difference in cost can have a substantial absolute effect on profits, for example, if the taxes cannot be shifted.[10] Nevertheless, major costs items such as wages are so much greater in total magnitude that very small differentials will have much more substantial influence on relative costs in different locations than great percentage differences in property taxation.

Although studies indicate that property taxes generally are not of major importance in industrial location decisions, in some instances taxes undoubtedly play a deciding role in determining location. This is most likely to be the case in the selection of an industrial site in a metropolitan area or region, when all other factors important in choosing a location balance except for property taxes.

When comparing property tax rates among locations, manufacturers must also evaluate the public services provided by property taxes. Low property tax rates can sometimes result in an increase in a manufacturer's costs. When low taxes mean poor public services, the firm may find it necessary to supply some of the services itself. High property taxes may result in very high levels of public services. Regular maintenance of city streets and good police, fire, and water services may contribute to a lowering of some costs faced by manufacturers.

Within the nine-county bay region, Berkeley's property tax rates compare extremely poorly with tax rates in other cities. In fiscal year 1975-76, the combined property tax rates in Berkeley were higher than the tax rates in all other cities in the region. Table 15 compares high and low combined property tax rates in 14 bay area cities in fiscal year 1975-76 (tax rates differ within a city depending upon the jurisdictional boundaries of taxing institutions such as public school districts and special service districts). Berkeley's lowest combined rate was still more than $1.50 higher than the region's second highest tax rate in Oakland.

Property taxes in Berkeley have not always been the highest of bay area cities. Table 16 provides a ranking of the high and low tax rates of 14 cities in the region in fiscal years 1955-56 and 1975-76. Twenty years ago, Berkeley's property tax rates ranked near the bottom of the 14 cities. In fiscal

TABLE 15

COMBINED PROPERTY TAX RATES IN 14 BAY AREA CITIES
FISCAL YEAR 1975-76

City	Low Property Tax Rate ($)	High Property Tax Rate ($)
Berkeley	16.69	16.76
Concord	11.64	13.33
Emeryville	9.49	12.63
Hayward	10.85	14.21
Napa	9.99	11.45
Oakland	11.45	15.04
Redwood City	9.05	12.31
Richmond	13.66	14.83
San Francisco	11.50	11.50
San Jose	10.38	13.89
San Leandro	9.02	12.18
Santa Clara	10.38	11.88
South San Francisco	8.35	9.87
Vallejo	9.76	12.09

Source: Contra Costa County, Tax Collector-Treasurer, Tax Rates, 1975-76; Alameda County, Auditor-Controller, Composite Tax Rates by Code Area, 1975-76; Napa County, County Auditor Controller, Tax Rates and Information, 1975-76; City and County of San Francisco, Annual Report of the Controller, 1975-76; San Mateo County, County Controller, Tax Rates and Valuations of Taxable Property, 1975-76; Solano County, Tax Collector, Conjunctive Tax Rates of the County of Solano by Code Area, 1975-76.

year 1965-66 (not shown in Table 16), Berkeley's low rate was ranked fifth among the 14 cities, yet its highest rate was ranked thirteenth. The dramatic jump in Berkeley's property tax rank between 1965-66 and 1975-76 was, in large part, due to the imposition of a city tax in 1966-67. The city tax rate in 1975-76 was $3.665 per $100 of assessed valuation.

All other factors important in location decisions being equal, manufacturers will find the property tax rates in other cities in the bay region more attractive than Berkeley's tax rates. It is not clear, however, to what extent firms presently located in Berkeley may benefit by moving to other bay area cities in search of lower property tax bills. Given the small percentage of total costs that property taxes represent, it is possible that firms operating at the margin may derive the greatest benefit from a lower tax bill (unless, of course, the costs of relocation cancel any savings obtained from lower property taxes).

Transportation Costs

Although the costs of transporting raw materials and finished goods are important factors in any manufacturer's location decision, these costs are difficult to quantify for Berkeley industries. Consequently, a comparison of Berkeley to other locations in the region with respect to transportation costs is not possible.

TABLE 16

RANKING OF 14 BAY AREA CITIES BY COMBINED PROPERTY TAX RATES: FISCAL YEARS 1955-56 and 1975-76

Fiscal Year 1955-56		Fiscal Year 1975-76	
Low Rate	High Rate	Low Rate	High Rate
Hayward	Hayward	BERKELEY	BERKELEY
Oakland	San Leandro	Richmond	Oakland
San Francisco	San Jose	Concord	Richmond
San Leandro	Oakland	San Francisco	Hayward
Redwood City	Redwood City	Oakland	San Jose
Napa	San Francisco	Hayward	Concord
Concord	Santa Clara	Santa Clara	Emeryville
Santa Clara	Napa	San Jose	Redwood City
S. San Francisco	S. San Francisco	Napa	San Leandro
Richmond	Richmond	Vallejo	Vallejo
San Jose	Concord	Emeryville	Santa Clara
BERKELEY	BERKELEY	Redwood City	San Francisco
Vallejo	Vallejo	San Leandro	Napa
Emeryville	Emeryville	S. San Francisco	S. San Francisco

Source: Alameda County, Auditor-Controller, Composite Tax Rates by Code Area, 1955-56, 1975-76; Contra Costa County, Tax Collector-Treasurer, Tax Rates, 1955-56, 1975-76; Napa County, County Auditor Controller, Tax Rates and Information, 1955-56, 1975-76; City and County of San Francisco, Annual Report of the Controller, 1955-56, 1975-76; San Mateo County, County Controller, Tax Rates and Valuations of Taxable Property, 1955-56, 1975-76; Solano County, Tax Collector, Conjunctive Tax Rates of the County of Solano by Code Area, 1955-56, 1975-76.

General statements about the effect of transportation costs on Berkeley industries can be made, however. Berkeley is centrally located within the bay region. The city has excellent access to regional, national, and international transportation networks. The city's industrial area is adjacent to Interstate Highway 80, and close to airport and seaport facilities in both Oakland and San Francisco. In addition, the area is served by rail spurs, and the Oakland Southern Pacific train terminal is nearby.

Berkeley is not unique among bay area cities in its proximity to transportation networks, however. The industrial areas of many cities in the region are adjacent to major highways, and as near to airport and seaport facilities as Berkeley's industrial area. Berkeley's central location in the region is only an asset to the extent that firms in Berkeley serve a bay area market.

Table 17 shows the results of a survey of the market area of firms in the industrial area of Berkeley. The survey was conducted by the Berkeley Comprehensive Planning Department in 1975. Fifty-eight firms responded to the survey, including more than 85 per cent of all firms in the industrial area that employed 25 or more persons. The figures shown represent the approximate percentage of total annual sales of the 58 firms made to six geographical areas.[11]

Clearly, the majority of sales were to markets outside of California. National and international markets accounted for

TABLE 17

MARKET AREA OF BERKELEY MANUFACTURING FIRMS: 1975

Market Area	Approximate Percentage of Total Annual Sales Made to Each Area
University of California, Berkeley	6.5
Berkeley (excluding University)	5.9
Bay Area (outside Berkeley)	19.4
California (outside Bay Area)	11.7
Nation (outside California)	25.9
International	30.5
Total	99.9

Source: City of Berkeley Comprehensive Planning Department, Berkeley's Economy and Proposals for Economic Planning, August, 1976, p. 18.

56.4 per cent of the annual sales of the responding firms. It is likely that the cost of transporting manufactured goods to national and international markets from Berkeley does not vary substantially from the costs of transporting goods from other cities in the region with similar proximity to air, rail, and port facilities. From the perspective of manufacturer-to-market transportation costs, therefore, Berkeley industries serving national and international markets could be located in Emeryville, Oakland, San Leandro, or Hayward with no appreciable difference in transportation costs.

Approximately 32 per cent of the annual sales of the

responding firms was to bay area markets. Berkeley's central location within the region may be a factor in lowering the transportation costs of firms that serve a regional market, relative to other cities. However, the degree of transportation cost advantage is dependent upon the distribution of the markets within the region.

Agglomeration Economies

Industrial location decisions are also influenced by the economic structure of communities. Two industries that do business with each other have an incentive to reduce their transfer costs (i.e., the costs of trade) by locating close to one another. Industries using jointly produced materials, manufacturing complementary products, tapping complementary labor markets, or utilizing similar business services and suppliers likewise have an incentive to be together. The grouping of many industries, therefore, can occur because of transfer cost economies inherent in agglomeration.

The development of the semiconductor and scientific instrument industries around Stanford University in Santa Clara County is a prime example of an existing industrial agglomeration in the bay region. Berkeley, however, has yet to give birth to an agglomeration of similar strength. Although industrial firms in Berkeley do use resources of the University of California, no major grouping of industries closely tied to the campus (to the same degree that scientific research firms

in Palo Alto were tied to Stanford) has occurred.

In Berkeley, like in the other older, established industrial areas in the region, business services, suppliers, and rental production space are available in a concentrated zone. Young industries are attracted to such areas because they can avoid substantial capital requirements due to pre-existing space and services. For these reasons, small, new industries may be attracted to Berkeley as an "incubation" area. When they grow and become viable, these industries are no longer so dependent on the services an established industrial area provides. Then, the industries can more easily move away from core industrial areas like Berkeley.

Social Costs

When making a selection among possible locations within a region, manufacturers may consider potential costs related to social factors such as crime. Manufacturers in high crime cities are often faced with more security problems and larger insurance bills than manufacturers in cities where robberies and burglaries occur less frequently. Manufacturers may also be concerned about the safety of their employees while travelling to and from work, especially when production processes require shift changes over a 24-hour period.

Although manufacturers may not compare actual crime statistics among cities, realtors, insurance agents, newspapers, and word-of-mouth provide a general appraisal of the

crime levels to be expected at various locations within a region. Table 18 lists the 1975 crime rates of 13 bay area cities for major offenses known to police. The rates are presented as offenses per thousand city residents. The rates in the first column include total offenses in the seven major crime categories reported by local police departments to the Federal Bureau of Investigation. The seven major crime categories are murder and non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny, and auto theft. The rates in the second column include only robbery, burglary, and larceny offenses; in other words, only crimes against property.

The crime rates in both columns should be interpreted cautiously. The rates represent city-wide offenses rather than the offenses that occurred in each city's industrial area. In addition, more crimes are committed in a city than the number of offenses known to police. Finally, crimes other than the seven reported to the FBI may directly effect manufacturers (e.g., vandalism).

As indicated in Table 18, the 1975 crime rates in Berkeley were higher than the rates in nearly all other cities shown. Berkeley had the second highest crime rate among the 13 cities for total offenses in the seven major crime categories. Berkeley's crime rate for robbery, burglary, and larceny offenses was the highest among the 13 bay area cities.

TABLE 18

NUMBER OF KNOWN MAJOR CRIMINAL OFFENSES IN 13 BAY AREA CITIES PER THOUSAND CITY RESIDENTS: 1975

City	Total Offenses in Seven Major Crime Categories per 1000 population	Robbery, Burglary, and Larceny Offenses per 1000 population
Berkeley	122.3	110.5
Concord	76.7	70.6
Hayward	62.7	54.7
Napa	58.5	52.5
Oakland	127.7	107.5
Redwood City	66.9	60.0
Richmond	117.3	97.5
San Francisco	95.6	77.7
San Jose	80.3	71.4
San Leandro	59.1	54.4
Santa Clara	79.1	71.2
South San Francisco	48.1	42.9
Vallejo	82.1	73.6

Note: Seven crime categories include murder and non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny, and auto theft.

Source: U.S. Federal Bureau of Investigation, Uniform Crime Reports for the United States, 1975, Table 6; State of California, California Statistical Abstract, 1976, Table B-6.

Summary

It is clear that Berkeley does not rank well among bay area cities as a site for manufacturing industries based on the factors evaluated. Berkeley does not have a resident labor force oriented toward production workers. Wages paid to production workers in the San Francisco-Oakland SMSA are higher than wages paid in the region's three other SMSA's. There is little available land for industrial development in Berkeley, and other bay area cities have considerably more vacant land zoned for industry. The cost of industrial land in Berkeley is high relative to the cost of land in many other cities in the region, especially for unimproved parcels. The combined property tax rates in Berkeley are higher than the tax rates in any other city in the region. Berkeley's crime rate is among the highest in the bay area. Finally, although Berkeley does have excellent access to transportation networks, many other cities in the bay area are as close, or closer, to highway, rail, airport, and seaport facilities.

SURVEY OF EMPLOYER LOCATION DECISIONS

Although other cities in the region appear to be more attractive locations for industry than Berkeley when evaluated by factors important in location decision-making, it is not clear to what extent these factors will influence a Berkeley manufacturer to relocate. In practice, a decision to relocate is difficult to make for any manufacturer. Changing the location of a plant is both expensive to the manufacturer and disruptive of the manufacturing process. Consequently, a manufacturer may be hesitant about leaving Berkeley despite his or her recognition of any advantages to be gained in other locations. Inertia may influence many contemplated moves from Berkeley, especially those being considered by manufacturers with substantial capital investments in buildings, machinery, and land.

In order to discover the actual factors that have influenced the movement of industries from Berkeley to other locations, a survey of manufacturers was undertaken. Owners and managers of manufacturing firms that left Berkeley for sites in other cities between January, 1970, and April, 1977, were interviewed by telephone. Each was asked to explain the factors important in the decision to move from Berkeley. An explanation of the sample and survey methodologies appears in Appendix A, and a copy of the survey questionnaire is included in Appendix B.

The final sample included 24 firms. During the course of several interviews, it was discovered that the businesses were wholesale or warehouse firms instead of manufacturing industries. These interviews were not terminated, however. The results of these five interviews have been analyzed in a separate section at the end of this chapter. Despite this segregation, the factors influencing the relocation decisions of wholesale and warehouse firms were very similar to the factors important to the 19 manufacturing firms surveyed.

Overview of Manufacturing Firms Surveyed

Most of the manufacturing firms surveyed left Berkeley for locations in other Alameda County cities. Table 19 shows the relocation sites of the 19 firms. Fourteen businesses, or 73.7 per cent of the firms surveyed, moved to cities in Alameda County. One-half of the firms relocating in Alameda County moved to the south county cities of San Leandro and Hayward. The only firm surveyed that moved outside the bay area relocated in Illinois.

Nearly 70 per cent of the firms moved from Berkeley between 1973 and 1976. Table 20 indicates that 13 of the surveyed firms left the city after December, 1972. The largest number of relocations in one year occurred in 1974. Most of the manufacturers interviewed said relocation had been under consideration by their firms for one or more years prior to the actual move.

TABLE 19

NEW LOCATION OF MANUFACTURING FIRMS SURVEYED

New Location	Number of Firms	Percentage of Total Firms
Alameda County		
Emeryville	3	15.8
Hayward	3	15.8
Oakland	4	21.1
San Leandro	4	21.1
Contra Costa County		
Concord	1	5.3
Richmond	1	5.3
San Mateo County		
South San Francisco	1	5.3
Santa Clara County		
Santa Clara	1	5.3
Outside Region	1	5.3
Total	19	100.0

Source: Employer Location Decision Survey

TABLE 20

YEAR MANUFACTURING FIRM MOVED FROM BERKELEY

Year Left Berkeley	Number of Firms	Percentage of Total Firms
1976	1	5.3
1975	3	15.8
1974	6	31.6
1973	3	15.8
1972	2	10.5
1971	1	5.3
1970	3	15.8
Total	19	100.0

Source: Employer Location Decision Survey

The 19 manufacturing firms represented 10 industrial sectors. Table 21 provides a distribution of the firms into major industrial sectors. The non-electrical machinery and chemicals and allied products sectors each accounted for four of the surveyed firms, the largest number of firms represented by individual sectors. Thirteen firms, or 68.4 per cent of those surveyed, were classified as chemicals and allied products, non-electrical machinery, electrical machinery, or scientific instrument industries.

TABLE 21

INDUSTRIAL CLASSIFICATION OF MANUFACTURING FIRMS SURVEYED

SIC Code	Industrial Sector	Number of Firms	Percentage of Total Firms
20	Food and Kindred Products	1	5.3
25	Furniture and Fixtures	1	5.3
27	Printing and Publishing	1	5.3
28	Chemicals and Allied Products	4	21.1
30	Rubber and Misc. Plastic Products	1	5.3
33	Primary Metals	1	5.3
34	Fabricated Metals	1	5.3
35	Non-Electrical Machinery	4	21.1
36	Electrical Machinery	2	10.5
38	Scientific Instruments	3	15.8
Total		19	100.0

Source: Employer Location Decision Survey

The relocation of the surveyed firms resulted in the loss of over 600 jobs in Berkeley. Three firms employed 100 or more workers. Four firms were unable to provide a count of the persons they employed at the time they moved from Berkeley.

Factors Important in Relocation Decisions of Manufacturers

The decision of the majority of manufacturers to leave Berkeley was initiated by a need to expand or consolidate their physical plants. Table 22 indicates the percentage distribution

of the five most important factors that influenced the surveyed firms to move from their Berkeley locations. Eleven manufacturers, or 57.9 per cent of those surveyed, said either the need for additional space or the desire to consolidate their Berkeley facilities (or facilities in other cities) was the primary factor in their decision to move.

Three manufacturers, or 15.8 per cent of the total, said the expiration of their lease or the condemnation of their property was the most important factor influencing their moves. The leases of two firms were not renewed and the property of the third firm was condemned by the Berkeley Redevelopment Agency.

Two manufacturers, or 10.5 per cent of the total, said the desire to sell their property for economic gain was the most important reason they moved. One manufacturer sold his property in order to use the profit from the sale to keep his business solvent. The other manufacturer was offered a high price for his property; an "offer we couldn't refuse," he said.

The remaining three manufacturers cited different factors as the major determinants of their location change. One moved primarily because his firm could not obtain adequate assembly workers in Berkeley. Another, who had purchased land in Hayward many years before, had an opportunity to locate his firm adjacent to the property. The third manufacturer's Berkeley plant had become outdated due to technological changes in the

TABLE 22

MOST IMPORTANT REASONS FOR LEAVING BERKELEY:
MANUFACTURING FIRMS

Reason	Reasons Mentioned In Order of Importance (%)					All Responses
	First	Second	Third	Fourth	Fifth	
Need to Expand or Consolidate	57.9	11.1				22.8
Lack of Available or Adequate Space		33.3	16.7	40.0		17.5
High Land Cost		11.1				3.5
High Property Tax		5.6	25.0	20.0		8.8
Negative Political & Social Environment		5.6	33.3	20.0	66.7	14.0
Poor Labor Base	5.3	5.6	8.3		33.3	7.0
Bought Land In Other City Many Years Ago	5.3	5.6				3.5
Lease Expired; Evicted; Eminent Domain	15.8	5.6				7.0
Sold Property for Profit	10.5					3.5
Technological Change in Industry	5.3					1.8
Other		16.7	16.7	20.0		10.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of Responses	19	18	12	5	3	57

Source: Employer Location Decision Survey

industry. A study by the firm concluded it would be cheaper to manufacture its product in a modern plant owned by the company in the Midwest than to remodel the Berkeley facility.

The factor more frequently mentioned than others as the second most important reason for leaving Berkeley was the lack of available or adequate manufacturing space in the city. Six manufacturers, or 33.3 per cent of those who mentioned a second factor, said they were unable to find space in Berkeley that satisfied their firms' needs. Several firms could not find buildings in Berkeley large enough to accommodate their proposed expansions. Another firm could not find a modern, attractive building in the city similar to those in new industrial parks. One manufacturer searched in vain for a building suitable for his "research and development" firm. He said he found most manufacturing space in Berkeley to be old, and in converted warehouses; not clean space with low ceilings, ample power hookups, and proper illumination necessary for light industry.

Two manufacturers, or 11.1 per cent of those mentioning two factors, said the high cost of land in Berkeley was the second most important factor influencing their decision to move from the city. One manufacturer said she was able to purchase three acres of land in another city for the cost of one acre of land in Berkeley. The other manufacturer had considered purchasing land in Berkeley and constructing a

building on the parcel, but decided the cost of land in the city was too high.

Although two manufacturers said Berkeley's high property tax rates and negative political and social environment were the most important secondary reasons for moving, these factors were more frequently mentioned as tertiary considerations. High property taxes and a negative environment for industry in Berkeley were listed as the third most important factors influencing the decision to leave the city by seven manufacturers, or 58.3 per cent of those mentioning three factors.

Manufacturers who included Berkeley's political and social environment among the factors important in influencing their decisions to leave the city typically said they had felt a high degree of uncertainty concerning future actions the city council might take that would affect industries. The manufacturers attributed an anti-business attitude to the city council, and were concerned that the council would increase taxes on business in order to finance the city's "aggressive social programs." The council was commonly described as "radical," and several manufacturers said they felt threatened by the hostility they perceived it displayed toward businesses.

Several manufacturers mentioned environmental factors unrelated to the city council. A chemical products manufacturer said the windows of his plant were broken, his trucks damaged, and the walls of his building defaced with painted

slogans by "radicals" who accused his firm of producing pollutants and chemicides. Another manufacturer said he had felt "trepidations about transient elements and social unrest" in Berkeley.

When all the responses were cumulated, the need to expand or consolidate physical plants ranked as the factor most frequently mentioned as important in influencing the move of manufacturing firms out of Berkeley. The lack of available or adequate manufacturing space in the city was the second most frequently mentioned factor. Berkeley's negative political and social environment ranked third among the total factors mentioned by the 19 manufacturers.

It is clear that the desire of manufacturers to expand or consolidate their physical plants does not itself explain why firms actually leave Berkeley. Similarly, losing a lease or selling property for profit explains why manufacturers move from their individual sites, but does not explain why they move from the city as a whole. These factors only initiate the search for another location. Other factors, such as the lack of adequate manufacturing space in the city, high land prices, and a poor labor base, are more important in determining why a manufacturer chooses to move to a different city rather than locating in Berkeley.

The interview results offered three general scenarios for the movement of firms from the city. The first scenario, and

the one most frequently described, is as follows: A Berkeley manufacturer begins to look for a new location because the firm needs to expand or consolidate space, its lease has expired and has not been renewed, or the property has been sold. The search either begins in Berkeley or includes the city as a possible site for relocation. Soon, however, factors such as the lack of adequate manufacturing space, high land costs, or a poor labor base in Berkeley cause the manufacturer to direct his or her search to other cities. Berkeley's high property tax rates and environment for industry influence the manufacturer's decision to look for a location in other cities only to a minor degree, if at all.

In Scenario Two, a manufacturer's search for a new location is initiated by the same needs as those affecting the manufacturer in Scenario One. The firm in Scenario Two, however, does not look for a relocation site in Berkeley. The city is not considered as a location choice because of the manufacturer's appraisal of Berkeley's environment for industry or the city's property tax rates.

In Scenario Three, a manufacturer's decision to leave Berkeley is initiated by factors other than the need to expand, the termination of a lease, or the sale of property. Instead, factors that immediately render Berkeley unsuitable as a site for relocation are primarily important in influencing the firm's move from the city (such as the difficulty in obtaining production workers).

As indicated above, the decision to move from Berkeley made by the majority of manufacturers followed the outline of Scenario One. Twelve manufacturers, or 63.2 per cent of those interviewed, explained their relocations in the fashion of Scenario One. The moves of four manufacturers, or 21.0 per cent of the total, were determined by the process outlined in Scenario Two. Three manufacturers, or 15.8 per cent of those interviewed, offered an explanation of their location change that corresponded to Scenario Three.

Property Tax and Business Climate As Relocation Factors

Because Berkeley's high property tax rate and negative business climate are popularly proclaimed as important factors influencing the movement of industries from the city, it might be worthwhile to expand on the survey results that pertain to each.

In general, the property tax rates in Berkeley did not play a major role in the relocation decisions of the 19 manufacturing firms. Only seven manufacturers specifically mentioned the influence of property taxes on their decisions to relocate. One manufacturer said the city's tax rates caused him to look elsewhere for a location for his expanding firm; he wanted to purchase a building rather than lease, and was concerned about the high property tax rates in Berkeley relative to the tax rates in nearby cities. Another manufacturer said the tax rate in Berkeley was one factor in his decision not to look for a

new location in the city, yet it was not among the most important factors influencing his firm's move. The remaining five manufacturers said Berkeley property taxes played only a minor role in their decisions to leave the city. One manufacturer said that although tax rates were high in Berkeley (the difference between his tax bills in Berkeley and his new location in San Leandro was $70,000; "enough to pay for four months' rent," he said), taxes were not a major consideration because they were such a small percentage of his firm's total costs.

Although property tax bills are more visible to property owners than to renters, only two of the six firms in the survey that owned their physical plants in Berkeley mentioned property taxes as a factor affecting their decision to leave the city. Both firms considered the influence of taxes on their relocation decision to be minor.

Not one of the 19 manufacturers thought Berkeley had a business climate that encouraged industry. Eleven manufacturers said the business climate of the city did not encourage industry, while eight manufacturers had no opinion or felt indifferent about the issue. Despite the majority's appraisal of Berkeley as a city that did not provide an environment conducive to industrial growth, less than half the manufacturers said Berkeley's business climate influenced their decision to leave the city. As mentioned previously, the effect of Berkeley's business climate on the relocation decision of these manufacturers was, in most cases, minor.

The cause of Berkeley's negative business climate was, to a large degree, attributed to the city council. Most manufacturers said the council's actions were unpredictable, resulting especially in uncertainty concerning future tax increases and other proposals that might affect industries. Although the council received the bulk of responsibility for the city's business climate, none of the manufacturers said their relocations were influenced by specific acts of the city council. However, several manufacturers said the council's discussion of policies it might implement was enough to discourage their firms from relocating in Berkeley.

Survey of Wholesale and Warehouse Firms

The five wholesale and warehouse firms surveyed moved from Berkeley between 1972 and 1975. Three of the firms left the city in 1974. Four firms relocated in Alameda County (three moved to San Leandro or Hayward) and the fifth firm relocated in Benicia. The relocation of the five firms resulted in the loss of approximately 65 jobs in Berkeley.

Factors Influencing Relocation of Wholesale and Warehouse Firms

The factors important in the relocation decisions of the five wholesale and warehouse firms were very similar to the factors that influenced the relocation of the manufacturing firms. Table 23 indicates the distribution of the three most important factors that influenced the firms to move from their Berkeley locations. Three firms reported that the need to

TABLE 23

MOST IMPORTANT REASONS FOR LEAVING BERKELEY:
WHOLESALE AND WAREHOUSE FIRMS

Reason	Reasons Mentioned In Order of Importance (number of firms mentioning each reason)			All Responses
	First	Second	Third	
Need to Expand or Consolidate	3	2		5
Lack of Available or Adequate Space		1		1
High Rents		1	1	2
High Property Tax			1	1
Negative Political & Social Environment			1	1
Market Area Shift	1	1		2
Landlord Problems	1			1
Number of Responses	5	5	3	13

Source: Employer Location Decision Survey

expand their physical plants was the most important factor influencing their moves from Berkeley. Another firm said the concentration of its market in southern Alameda County was the most important reason for its move to Hayward. The fifth firm said its move to a new location was primarily influenced by problems experienced with its landlord.

Secondary and tertiary factors influencing the move of wholesale and warehouse firms from Berkeley were also similar

to those important to manufacturers. The lack of available or adequate space in the city, high property taxes, and a negative business environment were all listed as factors affecting the relocation decisions of wholesale and warehouse firms.

Two factors important in the decision of wholesale and warehouse firms to move from Berkeley were not mentioned by the manufacturers surveyed. A paper products distributor and a warehouse firm both said their relocations were influenced by the high rents charged for space in Berkeley relative to the rents charged for comparable space in other cities. Two other firms said an important factor in their decisions to move to Hayward was the shift of their markets to Santa Clara and southern Alameda Counties. Although the sample is very small, it seems reasonable to assume that wholesale and warehouse firms are more sensitive than manufacturing firms to transportation cost differentials among locations in a region, primarily because wholesale and warehouse firms, in general, serve local markets. The market area of four of the five wholesale and warehouse firms was the San Francisco bay region, and two of the firms specified particular market areas within the region. The majority of manufacturers surveyed, on the other hand, said their market areas were not limited to the bay region. Fifteen manufacturing firms, or 78.9 per cent of those surveyed, said their primary market areas were located outside the nine-county region.

The wholesale and warehouse firms did not think Berkeley had a business climate that encourage industry. Three firms said the city's business climate did not encourage industry, and two firms had no opinion or felt indifferent about the issue.

Only two wholesale firms mentioned the influence of property taxes on their decisions to relocate. One wholesaler said property tax differentials among cities were important to his land- and inventory-intensive firm. Although the other wholesaler had considered tax differentials since he was interested in purchasing property for his firm, taxes were not a major factor in his ultimate decision to leave Berkeley.

CONCLUSIONS

The factors important in the decisions of manufacturers to leave Berkeley corresponded to many of the elements of location analysis discussed in Chapter III. Labor force characteristics and land costs were major influences on the relocation of Berkeley firms. In general, property taxes were only of minor importance in the decision of employers to leave the city. The lack of available land in Berkeley created hardships for firms seeking expansion space. Manufacturers said the transportation facilities necessary to serve their primarily non-regional markets are as convenient to their new locations as those facilities had been to Berkeley. The labor cost differential within the region was the only element discussed in Chapter III that was not mentioned by employers as a factor affecting the relocation of Berkeley industries.

It is clear that the majority of manufacturing, wholesale, and warehouse firms surveyed did not leave Berkeley primarily to escape high property taxes or an unsympathetic city council. Although these factors certainly influenced the relocation of many firms, other factors had much greater overall impact on the location decisions of employers. In particular, high land costs, a poor labor base for production workers, and inadequate or unavailable space for expansion in Berkeley were more important in determining the movement of industries from the city.

The number of manufacturing firms in Berkeley declined between 1963 and 1972. A recent study by the Berkeley Comprehensive Planning Department indicates this trend is continuing.[12] It is not clear to what extent the city can encourage industries to remain in Berkeley, however. An evaluation of the incentives necessary to prevent a further decline of manufacturing establishments in the city would require additional analysis beyond the scope of this report. Nevertheless, some policy alternatives can be offered as suggestions for future study. It should be recognized, however, that proposals to prevent industries from leaving Berkeley may be different than the policies necessary to attract manufacturers to the city.

Nearly all the manufacturing, wholesale, and warehouse firms surveyed said there was nothing specific the city could have done to keep them in Berkeley---at least nothing short of providing new and adequate expansion space or reducing taxes. Several firms, however, said they would have appreciated help from the city in searching for needed expansion space. Since many firms said they might have remained in Berkeley had they been able to find adequate expansion space, providing help in their search for space through a relocation service may allow some businesses to find locations in the city. As the interviews revealed, however, some firms moved to other cities not because space was unavailable in Berkeley, but because the available space was inadequate for their needs.

It was less expensive to move to adequate space in another city than to remodel old Berkeley industrial buildings, according to these firms. It is unlikely that a relocation service alone will be able to solve this dilemma.

The Berkeley Redevelopment Agency could actively encourage Berkeley firms in need or expansion space to relocate in the West Berkeley Industrial Park. A need for expansion space in the city clearly exists, and the Redevelopment Agency owns over one-half of Berkeley's vacant industrial land. Instead of concentrating its efforts on attracting out-of-town firms to Berkeley, the Redevelopment Agency might be more successful in increasing the occupancy of its industrial park if it aided those Berkeley firms searching for more land or larger facilities.

A survey conducted by the Comprehensive Planning Department has identified many manufacturers who are contemplating moves from Berkeley. The Redevelopment Agency may be able to encourage these firms to relocate in the West Berkeley Industrial Park by providing help in obtaining the capital necessary for expansion or by offering other financial incentives.

The city could also explore the possibility of renovating under-utilized industrial property or vacant industrial plants. The buildings of many former Berkeley manufacturers remain unoccupied. Purchased by the city or a community development corporation and then remodeled, these buildings may become

attractive to manufacturers who now judge old Berkeley industrial structures unsuitable for their expansion needs.

FOOTNOTES

[1]Dexter Waugh, "The Anti-Business Mood of Berkeley--Or Is It?", San Francisco Examiner, (March 20, 1977), Section A, p. 6.

[2]Ibid., p.7

[3]U.S. Department of Commerce, Office of Business Economics, Growth Patterns in Employment by County: 1940-1950 and 1950-1960, Volume 8, (Washington D.C.: U.S. Government Printing Office, 1965), p. ix.

[4]David Dowall, Analysis of the Economy of Philadelphia, Unpublished Thesis, p. 37-38.

[5]Raymond J. Struyk and Franklin J. James, Intraregional Industrial Location: The Pattern and Process of Change, (Lexington Mass.: Lexington Books, 1975), p. 123.

[6]Association of Bay Area Governments, Vacant Industrial Land Inventory, Working Paper no. 21, (February 23, 1976).

[7]John F. Due, "Studies of State-Local Tax Influences on Location of Industry," National Tax Journal, 14 (1961), p. 168-171.

[8]Ibid., p. 170.

[9]Charles R. Lewis, Survey of Business Taxes in the San Francisco Bay Area, (Berkeley, Ca.: Association of Bay Area Governments, August 1976), p. 1.

[10]Due, p. 171.

[11]City of Berkeley Comprehensive Planning Department, Berkeley's Economy and Proposals for Economic Planning, (August 1976), p. 17.

[12]City of Berkeley Comprehensive Planning Department, Survey of Business Licenses in Industrial Area, (1977).

APPENDIX A: SURVEY METHODOLOGY

No single, comprehensive record of the names of businesses that have moved from Berkeley exists. The survey sample was developed from three sources.

The Berkeley Chamber of Commerce records the names of businesses that leave the city in a quarterly report sent to the Alameda County Board of Supervisors. The data for the reports are collected from newspaper articles, chamber members, business locating services, and other sources. The new locations of the businesses are listed in the reports.

The quarterly reports between January, 1970, and September, 1976, were utilized for the survey. All businesses formerly located in the industrial area of Berkeley were included, as well as businesses in other sections of the city that appeared, by virtue of their names, to be manufacturing firms. Telephone numbers of the businesses were obtained from phone directories and directory assistance operators. Unfortunately, several firms were not located at the addresses indicated in the reports. Although attempts were made to acquire correct addresses, all were unsuccessful.

Additional names of manufacturing firms that are no longer located in Berkeley were obtained from the city's Comprehensive Planning Department. A study of business licenses issued by

the city to firms in the industrial area was recently completed by the planning department staff. A comparison of 1974 and 1976 licenses was made to determine which firms located in the industrial area in 1974 were not located there in 1976. If a license issued to a firm at a particular address in 1974 was not renewed in 1976, it was assumed that the firm had either moved from its 1974 Berkeley location or had gone out of business. It was also possible, however, that a firm had undergone a change of ownership or name between 1974 and 1976, therefore causing a change in the identifying information on its business license but not in its location.

Unlike the Chamber of Commerce reports, the Comprehensive Planning Department's business license study did not attempt to locate the firms that left Berkeley. For the purpose of this survey, the names of all manufacturing firms with five or more employees that did not renew their 1974 business licenses at the same address and under the same name in 1976 were recorded (business licenses include information concerning the SIC classification and number of employees of each firm). The addresses of firms that relocated in the bay area were obtained from a search through the current telephone directories representing every exchange in the nine-county region. No effort was made to discover the addresses of firms that either did not relocate in other bay area cities with the same name under which they did business in Berkeley, or relocated outside the region.

Names of manufacturing firms that have left Berkeley were also obtained from a realtor familiar with the industrial real estate market in Alameda and Contra Costa County. Mr. Griff Adams, of Coldwell Banker Commercial Brokerage Company, provided a list of industrial firms that left Berkeley within the past several years. Mr. Adams also indicated the new location of many of the firms listed. Addresses and telephone numbers of the remaining firms were obtained from phone directories and directory assistance operators.

None of the three sources comprehensively accounted for the movement of industrial firms out of Berkeley. Although it was expected that the data supplied by Mr. Adams would not account for all the firms that moved from Berkeley (Mr. Adams indicated that the list of firms he provided was only a partial list developed on short notice), it was interesting that the Chamber of Commerce and Comprehensive Planning Department data did not coincide in the years that they overlapped. The Chamber of Commerce reports listed firms that moved from the industrial area after January, 1974, that were not included in the Comprehensive Planning Department study. On the other hand, many firms listed in the Comprehensive Planning Department study were not included in the Chamber of Commerce reports. Also, the list of firms from Mr. Adams included the names of businesses that were neither in the Comprehensive Planning Department study nor the Chamber of Commerce reports. The three sources, therefore, provided less overlap of firms than had originally been

expected.

After collecting the names, addresses, and telephone numbers of manufacturing firms that have left Berkeley, a telephone interview of employers was conducted (questionnaire is included in Appendix B). The interviewer asked to speak with an individual in each firm "who made or participated in making the decision to leave Berkeley." In each case, the owner, chairman of the board, president, vice-president, or general manager of the firm was interviewed.

APPENDIX B: BERKELEY INDUSTRY INTERVIEW

Firm Name _____

Address _____

Phone _____

Contact _____

_____

1. What does your firm do?

2. You left Berkeley in _____ ?

3. Did you rent or own your building in Berkeley?

Rent _____

Own _____

4A. Did you move all or just part of your business out of Berkeley?

All _____ (SKIP TO 5)

Part _____

B. If only part of your business moved, which part left Berkeley?

C. Which part remained in Berkeley?

5A. Did you expand to a larger operation when you moved?

Yes ____

No ____ (SKIP TO 6)

B. IF YES, how much did you expand?

Berkeley _____

New Location _____

Increase _____

C. IF YES, what kind of expansion took place?

6A. Let's see, you're located in _____ now...

Are you satisfied with your new location?

Yes _____ (SKIP TO 7)

No _____

B. IF NO, why are you dissatisfied?

7. What does your new site provide that your location in Berkeley did not?

8A. After you moved, did you feel that your new location lived up to all the expectations you had for it?

Yes _____ (SKIP TO 9)

No _____

B. IF NO, why were you disappointed?

9A. What was the most important factor in your decision to leave Berkeley?

B. Were there other factors that influenced your move?

C. Can you rank the factors in order of importance?

1)

2)

3)

4)

5)

10. Did the decision to move evolve over a long period of time or was there something that caused you to quickly make up your mind to leave?

Evolve over a long period _____

Made the decision quickly _____

11. How long had you been considering the move?

_____ Years

_____ Months

12A. Were there any specfic acts by the city council, the city manager, or any city department that influenced your decision to move?

Yes _____

No _____ (SKIP TO 13)

B. IF YES, what were they?

13. How would you describe your relationship with the Berkeley city government?

14. How important was Berkeley's property tax rate in your decision to move?

15A. Do you think Berkeley has a business climate that encourages industry?

Yes _____

No _____

B. Explain

16A. Was there anything the city could have done to keep you in Berkeley?

Yes _____

No _____ (SKIP TO 17)

B. IF YES, what could the city have done?

17A. If you were starting you business today, would you locate in Berkeley?

Yes _____

No _____

B. Why?

18. What geographical area do you consider your primary market area?

San Francisco Bay Area _____

California _____

Nation _____

International _____